CUSTOMER NO.: 24498
Serial No. 09/936,479
Appeal Brief

Internal Docket No. PD990014

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Applicant: SCHWEIDLER, Siegfried et al. Examiner: LI, Zhuo H.

Serial No: 09/936,479 Group Art Unit: 2185

Filed: September 13, 2001 Docket: PD990014

Confirmation No.: 6074

For: Method for the Management of Data Received via a Data Bus, and Apparatus for Carrying Out the Method

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APPEAL BRIEF

Appellant appeals the status of Claims 1 – 9 as presented in response to the final Office Action dated August 6, 2009, and pursuant to the Notice of Appeal filed on December 4, 2009 submits this Appeal Brief. Please charge the fee of $540.00 for submitting the Appeal Brief to our Account #07-0832.

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1. Real Party in Interest

The real party in interest is THOMSON LICENSING, the owner of the entire right, title and interest in and to the subject application.

2. Related Appeals and Interferences

Appellant is not aware of any appeals or interferences related to the present application.

3. Status of Claims

a) Claims 1 – 9 are pending. Claims 1 and 5 are independent.

b) Claims 1 – 9 stand rejected and are under appeal.

4. Status of Amendments

An amendment was filed and entered on July 2, 2008 in response to a non-final Office Action dated January 17, 2008. A response was filed on June 19, 2009 in response to another non-final Office Action dated October 17, 2008. In the June 19, 2009 response, none of the pending claims was amended. No responses/amendments were filed subsequent to the June 19, 2009 response, nor are any amendments pending. The claims listed in section 8 "Claims Appendix" of this Appeal Brief correspond to the claims submitted in Appellant's amendment on July 2, 2008.

5. Summary of Claimed Subject Matter[1]

The claimed invention, as recited in claim 1, is directed to a method for the management of data received via a serial data bus in a receiving device, comprising: receiving data transmitted in bus packets having a variable length, each bus packet having a header and a payload data field (Fig. 1; page 5, lines 36 – 37), the payload data field being divided into a plurality of data blocks having a defined length (Fig. 1, DB0 – DB7; page 6, lines 8 – 10), a data block consisting of a plurality of data words, the plurality of data words being a fixed amount (page 11, lines 4 – 6), a combination of a defined number n of data blocks forming a data source packet of fixed length (Fig. 1, DB0 – DB7; page 6, lines 14 – 18), section by section transmission of the data source packet within the framework of data blocks being permitted (Fig. 1, SP0 – SP2; page 7, lines 2 – 31); and carrying out a modulo n counting of the data blocks in order to determine the data source packet boundaries (page 9, lines 3 – 6), and in that the beginning of a new data source packet is signaled to a memory management device at the beginning of the next counting interval (page 9, lines 6 – 16).

The claimed invention, as recited in claim 5, is directed to an apparatus for managing data received via a serial data bus in a receiving device, comprising a receiver (Fig. 2; page 8, lines 15 – 16) for receiving data transmitted in bus packets

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[1] *It should be explicitly noted that it is not the Appellant's intention that the currently claimed or described embodiments be limited to operation within the illustrative embodiments described below beyond what is required by the claim language. Further description of the illustrative embodiments are provided indicating portions of the claims which cover the illustrative embodiments merely for compliance with requirements of this appeal without intending to read any further interpreted limitations into the claims as presented.*

having variable length, the bus packets having a header and payload data field (Fig. 1; page 5, lines 36 – 37), the payload data field being divided into a plurality of data blocks having a defined length (Fig. 1, DB0 – DB7; page 6, lines 8 – 10), a data block consisting of a plurality of data words, the plurality of data words being a fixed amount (page 11, lines 4 – 6), a combination of a defined number n of data blocks forming a data source packet of fixed length (Fig. 1, DB0 – DB7; page 6, lines 14 – 18), section-by-section transmission of the data source packet within the framework of data blocks being permitted (Fig. 1, SP0 – SP2; page 7, lines 2 – 31), having a memory unit (Fig. 2; page 8, lines 15 – 16) to which the received data are written in order, and having a memory management device wherein a modulo n counter is provided (Fig. 2; page 8, lines 21 – 23), which counts the received data blocks and outputs a data source packet start signal to the memory management device at the beginning of the next counting interval (page 9, lines 3 – 16).

6. Grounds of Rejection to be Reviewed on Appeal

A. Whether claims 1, 4, 5, 8 and 9 are properly rejected under 35 U.S.C. §103(a) over Lo et al. (US PAT. 6,324,178, hereinafter Lo) in view of Smith (US 6,961,890) and Gillard et al. (US PAT. 5,404,166, hereinafter Gillard).

B. Whether claims 2, 3, 6 and 7 are properly rejected under 35 U.S.C. §103(a) over Lo in view of Smith and Gillard as applied in claims above, and further in view of Boyer et al. (US PAT. 5,410,546, hereinfafter Boyer).

7. Argument

Appellant respectfully traverses the rejections in accordance with the detailed arguments set forth below.

A. Claim 1, 4, 5, 8 and 9 are not properly rejected under 35 U.S.C. §103(a) over Lo in view of Smith and Gillard.

It is respectfully submitted that the Examiner failed to establish a *prima facie* case of obviousness, because as discussed below, a suggestion of all limitations in Appellant's claims is lacking in the combination of Lo, Smith and Gillard.

1. Claim 1

For example, claim 1, in part, requires:

> "*receiving data transmitted in bus packets having a variable length, each bus packet having a header and a payload data field, the payload data field being divided into a plurality of data blocks having a defined length, a data block consisting of a plurality of data words, the plurality of data words being a fixed amount, a combination of a defined number n of data blocks forming a data source packet of fixed length, section by section transmission of the data source packet within the framework of data blocks being permitted.*" (Emphasis added)

In the Office Action, page 3, the Examiner alleged that Lo, Fig. 8A, teaches the payload data field being divided into a plurality of data blocks having a defined length. Appellant respectfully disagrees.

Appellant submits that Lo, Fig. 8A and Fig. 8B, left hand side, expressly

discloses that the payload field includes just one single data block (see the label "DATA BLOCK" below the label "PACKET HEADER"), but not a plurality of data blocks having a defined length, as claimed. Appellant submits that nowhere does Lo disclose or suggest that there are multiple data blocks in the payload. Apparently, Lo, Fig. 8A and Fig. 8B show that the data payload field consists of a number of quadlets, where each quadlet is sequentially called "data block quadlet 1," "data block quadlet 2," etc. Furthermore, Figs. 8A and 8B show that the single data block contains a number of quadlets, and thus a data block quadlet represents a 32-bit word contained within the single data block, and hence, a skilled person would not consider the quadlets in Lo as the equivalent of the claimed data blocks because it is particularly specified in the claim that a data block from the payload data field itself is made up of a plurality, but fixed amount of data words. Therefore, Lo fails to teach or suggest *the payload data field being divided into a plurality of data blocks having a defined length, a data block consisting of a plurality of data words, the plurality of data words being a fixed amount,* as claimed.

In the Office Action, pages 8 – 9, Response to Arguments section, the Examiner asserted that Lo, Fig. 8 teaches a plurality of data blocks with each data block having 32 bits. Appellant respectfully submits that a skilled person would not unreasonably interpret the 32-bit quadlets as data blocks, but would naturally consider the quadlets as 32-bit data words. As already discussed above, the left hand side of Figs. 8A and 8B clearly show that there is a single data block and that the data block includes a plurality of data block quadlets. Since there is an explicit designation of a single data block (left hand side of Figs. 8A and 8B), there is no reason for a skilled person to define a data

block any other ways that are inconsistent with Lo's definition. Therefore, Lo fails to disclose *the payload data field being divided into a plurality of data blocks having a defined length*, as claimed.

In the Office Action, page 3, the Examiner conceded that Lo does not teach a data block consisting of a plurality of data words, the plurality of data words being a fixed amount. However, the Examiner asserted that that it is old and notoriously well-known in the art to have a data block consisting of a plurality of data words, pointing to Smith, Figs. 1 – 2 and column 3 line 49 through column 5 line 17. Regardless of whether Smith teaches a data block consisting of a plurality of data words, the plurality of data words being a fixed amount, Appellant respectfully submits that Smith does not in any way cure the deficiency in Lo as discussed above, because Smith does not teach or suggest that the payload data field is divided into a plurality of data blocks having a defined length. There is no indication in Smith that the payload section (202) itself is partitioned into a plurality of data blocks.

As shown in Fig. 2 of Smith, there is a data structure (200) consisting of a payload (202) and an ECC field (204). Evidently the payload field (202) consists of a plurality of data words D0, D1, D2, etc., and those data words may have a defined bit length like 16 bits, 32 bits, 64 bits or others (column 4, lines 32 – 37). Therefore, when taking the 32-bit length for the data words, the data words correspond to quadlets of Lo. Hence, when combining the teachings of Lo and Smith, a skilled person would identify the plurality of quadlets in Lo as a plurality of data words, but would not consider the plurality of quadlets as the claimed plurality of data blocks, because each of the claimed data block consists of a plurality of data words. Therefore, combining the teachings of

Lo and Smith would still only lead a skilled person to have a single data block with a plurality of data words (quadlets), but not *the payload data field being divided into a plurality of data blocks having a defined length*, as claimed.

Appellant further submits that there is no reason for a skilled person to combine Lo and Smith because their teachings are cumulative, as both teach a single data block with a plurality of data words. In the Office Action, pages 3 and 9, the Examiner asserted that the reason to combine is to provide the data integrity required in response to changing condition. Appellant respectfully disagrees with such reasoning. Smith teaches a divider segregating the payload and redundancy portions may be dynamically relocated, thereby altering the size of the redundancy to allow for use of an error correcting code selected to provide the data integrity required in response to changing conditions (see e.g., Abstract). Therefore, the dynamic relocation of the divider between the payload and redundancy portions is motivated by the data integrity required in response to changing conditions. Appellant submits that the dynamic relocation of the divider is unrelated to data blocks or data blocks consisting of a plurality of data words. Therefore, there is no reason to combine the teachings of Lo and Smith. According to MPEP 2141, section IV, office personnel must articulate findings of fact that support the rationale relied upon in an obviousness rejection. Therefore, Appellant submits that the Examiner has not established a rationale for combining Lo and Smith.

Appellant further submits that there is no showing that Gillard can cure the deficiencies in Lo and Smith with respect to claim 1 as discussed above. In the Office Action, the Examiner apparently only relied on Gillard for teaching the additional

features recited in claim 1, but did not allege that Gillard teaches the feature of *the payload data field being divided into a plurality of data blocks having a defined length, a data block consisting of a plurality of data words, the plurality of data words being a fixed amount*, which Lo and Smith were relied upon as the alleged teaching.

In view of at least the foregoing, Appellant submits that claim 1 is patentable over Lo, Smith and Gillard, either singly or in combination, and the rejection should be reversed.

2. Claim 5

Similarly, Appellant's independent claim 5, in part, requires:

"*the payload data field being divided into a plurality of data blocks having a defined length, a data block consisting of a plurality of data words, the plurality of data words being a fixed amount.*"

Claim 5 is different from claim 1, however the relative argument used above for claim 1 may be applied to claim 5. Therefore, Appellant essentially repeats the above arguments for claim 1 and applies them to claim 5, pointing out why Lo, Smith and Gillard fail to teach or suggest the above claimed features. Thus for at least the reasons discussed above for claim 1, claim 5 patentable over Lo, Smith and Gillard and the rejection should be reversed.

3. Claims 4, 8 and 9

Claims 4, 8 and 9 respectively depend from one of claims 1 and 5, and inherit all the respective features of their respective base claim. Therefore, claims 4, 8 and 9 are patentable for at least the reason that they respectively depend from claims 1 or 5, with

each claim containing further distinguishing features, and the rejection should be reversed.

B. Claims 2, 3, 6 and 7 are not properly rejected under 35 U.S.C. §103(a) over Lo in view of Smith and Gillard, and further in view of Boyer.

Appellant submits that Boyer does not in any way cure the deficiencies in Lo, Smith and Gillard with respect to claims 1 and 5 above. Claims 2, 3, 6 and 7 respectively depend from one of claims 1 and 5, and inherit all the respective features of their respective base claim. Therefore, claims 2, 3, 6 and 7 are patentable for at least the reason that they respectively depend from claims 1 or 5, with each claim containing further distinguishing features, and the rejection should be reversed.

Conclusion

The cited references, either singly or in combination, fail to teach or suggest all of the claim limitations of the pending claims. Accordingly, it is respectfully requested that the Board reverse the rejection of claims 1 – 9 under 35 U.S.C. §103(a).

Respectfully submitted,

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8. CLAIMS APPENDIX

1. (Previously presented): Method for the management of data received via a serial data bus in a receiving device, comprising:

receiving data transmitted in bus packets having a variable length, each bus packet having a header and a payload data field, the payload data field being divided into a plurality of data blocks having a defined length, a data block consisting of a plurality of data words, the plurality of data words being a fixed amount, a combination of a defined number n of data blocks forming a data source packet of fixed length, section by section transmission of the data source packet within the framework of data blocks being permitted; and

carrying out a modulo n counting of the data blocks in order to determine the data source packet boundaries, and in that the beginning of a new data source packet is signaled to a memory management device at the beginning of the next counting interval.

2. (Previously presented): Method according to Claim 1, wherein each bus packet is subjected to CRC checking and the checking results are buffer stored in order to be able to ascertain whether a data source packet transmitted in two or more bus packets has been transmitted without transmission errors.

3. (Previously presented): Method according to Claim 1 wherein a reference counter reading is transmitted in each bus packet in order to check the completeness of the transmitted data, and in which comparison counting of the received data blocks is effected and, when the data block associated with the reference counter reading is received, the result of the comparison counting is compared with the reference counter reading and an error signal is output in the event of non correspondence.

4. (Previously presented): Method according to Claim 1, wherein the defined number n of data blocks of a data source packet corresponds to the number 8 and the modulo n counting is correspondingly modulo 8 counting.

5. (Previously presented): Apparatus for managing data received via a serial data bus in a receiving device, comprising

a receiver for receiving data transmitted in bus packets having variable length, the bus packets having a header and payload data field, the payload data field being divided into a plurality of data blocks having a defined length, a data block consisting of a plurality of data words, the plurality of data words being a fixed amount, a combination of a defined number n of data blocks forming a data source packet of fixed length, section-by-section transmission of the data source packet within the framework of data blocks being permitted, having a memory unit to which the received data are written in order, and having a memory management device wherein a modulo n counter is provided, which counts the received data blocks and outputs a data source packet start signal to the memory management device at the beginning of the next counting interval.

6. (Previously presented): Apparatus according to Claim 5, further comprising a CRC checking unit, by means of which the data in the received bus packets are checked with regard to freedom from errors, where the checking results of a plurality of successive bus packets are buffer stored and combined if the data source packet start signal has been identified, and where the CRC checking unit outputs an error signal if one of the combined checking results includes an identified error.

7. (Previously presented): Apparatus according to Claim 5, further comprising a data block reference counter, which effects the comparison counting of the received data blocks, and where comparison means are provided which compare the counter reading of the data block reference counter with the received reference counter reading of the bus packet and output an error signal in the event of non correspondence.

8. (Previously presented): Apparatus according to Claim 5, further comprising a data counter, by which the data are counted in particular in units of bytes and which outputs a data block counting signal if the number of data that have been counted are as many as are defined as belonging to a data block.

9. (Previously presented): Apparatus according to Claim 5, wherein the data bus is designed according to the IEEE 1394 standard and the apparatus is part of a data link layer module in the interface for this data bus.

9. RELATED EVIDENCE APPENDIX

No evidence has been submitted pursuant to §§ 1.130, 1.131, or 1.132 of this title nor any other evidence entered by the examiner and relied upon by appellant in the appeal.

10. RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any appeals or interferences related to the present application.